



An isolated polynucleotide comprising:

- (a) a nucleotide sequence encoding a polypeptide having defensin activity, wherein the amino acid sequence of the polypeptide and the amino acid sequence of SEQ ID NO:4 have at least 90% sequence identity, or
- (b) the complement of the nucleotide sequence.

2. The isolated polynucleotide of Claim 1, wherein the amino acid sequence of the polypeptide and the amino acid sequence of SEQ ID NO:4 have at least 95% sequence identity.

14. A method for producing a transgenic plant comprising transforming a plant cell with the polynucleotide of Claim 1 to produce a transformed plant cell and regenerating a plant from said transformed plant cell.

22. A method for production of a polypeptide having defensin activity comprising the steps of cultivating the cell of Claim 13 in culture medium under conditions that allow for the synthesis of the polypeptide and isolating the polypeptide from said cell, from the culture medium, or from both said cells and said culture medium.

[Please add the following new claim:]

23. An isolated polynucleotide that specifically hybridizes under highly stringent conditions to the complement of the sequence set forth in SEQ ID NO:3, wherein said polynucleotide encodes a polypeptide having defensin activity and wherein said highly stringent conditions comprise a series of post-hybridization washes comprising two final washes in 0.1X SSC, 0.1% SDS at 65°C.

2. An isolated polynucleotide comprising:

- (a) a nucleotide sequence encoding a polypeptide having defensin activity, wherein the amino acid sequence of the polypeptide and the amino acid sequence of SEQ ID NO:4 have at least 90% sequence identity, or
- (b) the complement of the nucleotide sequence.

2. The isolated polynucleotide of Claim 1, wherein the amino acid sequence of the polypeptide and the amino acid sequence of SEQ ID NO:4 have at least 95% sequence identity.

3. (amended) The isolated polynucleotide of Claim 1, wherein the amino acid sequence of the polypeptide and the amino acid sequence of SEQ ID NO:4 have at least 90% sequence identity based on the Clustal alignment method.

4. (amended) The isolated polynucleotide of Claim 1, wherein the amino acid sequence of the polypeptide and the amino acid sequence of SEQ ID NO:4 have at least 95% sequence identity based on the Clustal alignment method.

5. (amended) The isolated polynucleotide of Claim 1, wherein the amino acid sequence of the polypeptide comprises the amino acid sequence of SEQ ID NO:4.

6. (amended) The isolated polynucleotide of Claim 1, wherein the nucleotide sequence comprises the nucleotide sequence of SEQ ID NO:3.

7. (amended) A recombinant DNA construct comprising the polynucleotide of Claim 1 operably linked to at least one regulatory sequence.

8. A vector comprising the polynucleotide of Claim 1.

claim 9-11 cancelled

12. A method for transforming a cell comprising transforming a cell with the polynucleotide of Claim 1.

13. (amended) A cell comprising the recombinant DNA construct of Claim 7.

14. A method for producing a transgenic plant comprising transforming a plant cell with the polynucleotide of Claim 1 to produce a transformed plant cell and regenerating a plant from said transformed plant cell.

15. (amended) A plant comprising the recombinant DNA construct of Claim 7.

16. (amended) A seed comprising the recombinant DNA construct of Claim 7.

claim 17-21 cancelled

22. A method for production of a polypeptide having defensin activity comprising the steps of cultivating the cell of Claim 13 in culture medium under conditions that allow for the synthesis of the polypeptide and isolating the polypeptide from said cell, from the culture medium, or from both said cells and said culture medium.

23. An isolated polynucleotide that specifically hybridizes under highly stringent conditions to the complement of the sequence set forth in SEQ ID NO:3, wherein said polynucleotide encodes a polypeptide having defensin activity and wherein said highly stringent conditions comprise a series of post-hybridization washes comprising two final washes in 0.1X SSC, 0.1% SDS at 65°C.